I. A. (continued)

As a private company operating in San Diego, General Atomics (GA) conducts all activities in accordance with all city, county, state (CAL OSHA) and federal laws and regulations. The proposed project utilizes the existing DIII-D National Fusion Facility located on the General Atomics Torrey Pines campus in San Diego, California, with an estimated replacement cost of approximately $850M. The DIII-D Program encompasses approximately 115,000 SF of operations/laboratory space and 35,000 SF of office space for the scientific/engineering staff. The proposed research will make use of a facility provided by General Atomics. There are no plans for new utility lines or for extension excavation in the proposal.

III.B.1. Work to be performed outdoors?

Auxiliary equipment (Motor Generators, Power Supplies, Transformers, Cooling Towers), gas storage, materials, and other equipment are located in the yard surrounding the Tokamak and Diagnostic laboratory buildings. Maintenance performed on this equipment is done at the site of the equipment.

IV.A.10 Coastal Zones

General Atomics Torrey Pines site which houses the DIII-D National Fusion Facility is within the California Coastal Commission jurisdiction. Activities associated with the research and operation of the DIII-D Tokamak will have no impact on the Coastal zone.

IV.B.22. Chemical Storage/Use Including Emerging Chemicals (e.g., PFAS)

Small quantities of the following chemicals listed in 29CFR1910.1000 table as listed below:

Acetone - 5 gallons (maximum in storage at any given time)

Ethyl Alcohol 200 proof - 5 gallons (maximum in storage at any given time)

lsopropyl alcohol - 5 gallons (maximum in storage at any given time)

Handling, storage and disposal for these materials is in accordance with the General Atomics Program and Procedures Manual. This includes (a) use of chemical cabinets or other appropriate storage equipment; (b) segregation and storage of chemicals by compatibility class; (c) use of bonding and grounding (as appropriate); (d) use of local exhaust ventilation (where needed); (e) use of respirators or personal protective equipment to prevent Worker overexposure; (f) use of secondary containment for storage of liquids; (g) availability and use of spill response equipment; and (h) storage time limits prescribed in regulations.

IV. B. 26. Spill Prevention/Surface Water Protection?

A Spill Prevention Control & Countermeasure Plan and an Oil Spill Contingency plan has been prepared in accordance with Part 112 and Part 109 of 40CFR112.

IV. B. 28. Hazardous Waste?

Hazardous waste is generated and collected per County of San Diego, DEH, Hazardous Materials Permit. Radioactive waste, including tritium mixed waste is generated and managed per California Department of Public Health, Radiologic Health Branch broad scope (Type A) radioactive materials license number 0145-37. Waste is transported off site by a licensed transportation company specializing in hazardous

and radioactive waste. GA has a federal EPA ID #CA R000198143 for transportation of such waste. Waste generated is from general cleaning and tooling process pertaining to the fusion activities.

IV. B. 30. Radioactive or Radioactive Mixed Waste?

Although tritium is not used as a fuel in the DIII-D experiment, small quantities of tritium are produced as a natural byproduct of the fusion of deuterium nuclei in DIII-D experiments. Radioactive mixed waste is thus generated from tritium contaminated vacuum pump oil. See above IV.B.28 for details on handling and disposal. Tritium is also released to the environment as a gaseous effluent at a maximum rate of 0.7 Curies/year in the form of HTC, HT, OT, and DTO (tritiated water vapor). See IV.B.31 below for effective dose at the site boundary resulting from this release of Tritium.

IV.B.31. Radiation Exposure?

The major source of radiation derives from prompt neutron emission from the fusion reaction, x-rays from high energy electrons, and gamma rays from decay of material made radioactive by the fusion neutrons. Additional radioactive sources are used for equipment calibration and include the following isotopes: Am-241, Fe-55, Cf-252, Sr-90, Co-60, Po-210, CS-137, and Tl-204. Exposures from these additional sources is minimal compared to neutron and gamma dose rates. The facility adheres to State & Federal regulations and DOE guidance. The site ALARA (As Low As Reasonably Acheivable) plan calls for keeping both Public and Staff exposure levels to less than the limits set by State and Federal regulations. Site boundary limits are set by California regulations. A monitoring program has been established for both site boundary and staff exposure levels. Typical public site boundary doses are 5 -10 mrem/quarter and historically below our administrative limit of 15 mr/quarter. Employee dose rates are typically 100 mrem/quarter and historically below the California limits of 5000 mrem/year and below our administrative limits of 1600 mr/year and 400 mrem/quarter.

For tritium release, calculations of effective dose at the site boundary (using distance from site boundary, height of exhaust, and local meteorological conditions) yield total effective dose equivalent (TEDE) and effluent concentrations a factor of 1,000 less than the limits (10 mrem; 1 E-7 uCi/ml) listed in 10CFR20 for tritium. The California Code of Regulations defers to the Federal Regulations, specifically 1 0CFR20, for dose limits to radiation workers, members of the public and effluent from licensed operations.

DIII-D is also registered with the state of California as a radiation producing device. There are 11 devices on the DIII-D site registered with California under Facility Code FAC00042578.

IV. B. 38. Facility Footprint exceeds 5000 square feet

The DIII-D facility exceeds 5000 square feet as detailed in the extended response to question I. A. provided above.

IV.C.39. Existing, Modified, or New Federal/State Permits

The following permits are currently in effect and will continue:

- Air Pollution Control District of SD County (APCD): Emergency generators, vapor degreasers, fiberglass machining room.

- County of SD, Department of Environmental Health (DEH): Unified Program Facility Permit: Permit for Facilities that have reportable quantities of hazardous materials and that generate hazardous waste.
- San Diego Fire Department: Permits for Hazardous Materials and Compressed gas systems.
- State of California Dept. of Industrial Relations, Div. of Occupational Safety and Health (DOSH): Pressure vessels (air tanks).
- California Highway Patrol: Hazardous Materials transportation license.
- California Department of Motor Vehicles: Motor Carrier permit.
- US Department of Transportation: Hazardous Materials Certificate of Registration.
- US EPA: Federal EPA ID# CA R000198143.

IV. C. 41. Action in a State with NEPA-type law

General Atomics Torrey Pines site which houses the DIII-D National Fusion Facility is within the California Environmental Protection Agency (CalEPA) jurisdiction. All activities associated with the research and operation of the DIII-D Tokamak are in full compliance with CalEPA program requirements.

IV. C. 44. Subject to an Existing Institutional Work Planning and Control Process

All activities are conducted in accordance with the existing General Atomics' Environmental Health and Safety Program and Procedures Manual.